# RoboCup 2023 Submission Survey

## Survey response 1

### Software

| Team Name |
| --- |
| EEPIS EROS |

| Is your software fully or partially OpenSource. If so, where can it be found: |
| --- |
| We don't share our source code for now |

| Do you have a kinematic or dynamic model of your robot(s)? If so, how did you create it (e.g. measure physical robot, export from CAD model)? |
| --- |
| We have kinematic and dynamic model of our robot, we generate URDF file from solidworks 3D design, then using it on gazebo simulation. |

| Are you using Inverse Kinematics? If so what solution (analytic, (pseudo)inverse jabcobian, etc...) are you using? |
| --- |
| We are using inverse kinematic to create walking trajectory. |

| Are you simulating your robot? If so what are you using simulation for? |
| --- |
| Using URDF file on gazebo. |

| What approach are you using to generate the robot walking motion? |
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| Using calculation form inverse kinematic of robot leg position. |

| What approach are you using to generate motions for standing up? |
| --- |
| We create a several package motion for standing up form front fall, side fall, and back fall. Each package motion contained specific angle servo movement. |

| What approach are you using to generate kicking motions? |
| --- |
| Create kicking with send specific angle of each servo movement. |

| Do you use any other motions than the previously mentioned? If so, what approaches are you using to generate them? |
| --- |
| No. |

| Which datasets are you using in your research? If you are using your own datasets, are they public? |
| --- |
| We use our own datasets for ball and landmark detection. Currently our datasets is not public yet. |

| What approaches are you using in your robot's visual perception? |
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| In our visual perception, we start the object detection by eliminating any object outside the field. After the elimination, we start our object detection algorithm to detect ball and landmarks. |

| Are you planning with objects in Cartesian or image space? If you are using Cartesian space, how do you transform between the image space and cartesian space? |
| --- |
| We use image space. |

| How is your robot localizing? |
| --- |
| Our robot localize itself by dead reckoning algorithm and visual correction using landmark. |

| Is your robot planning a path for navigation? Is it avoiding obstacles? How is the plan executed by the robot (e.g. dynamic window approach)? |
| --- |
| Our robot has no ability to avoid obstacles for now, it is still in the development stage. |

| How is the behavior of your robot's structured (e.g. Behavior Trees)? What additional approaches are you using? |
| --- |
| Our strategy in team play is to determine the rank of each robot, when robot that gets rank 1 will be tasked with executing the ball, while other robots will move to certain positions on the field, ranking is based on how close the robot is to the ball and the robot's position. |

| Do you have some form of active vision (i.e. moving the robots camera based on information known about the world)? |
|---|
| Yes, there is an algorithm in our robot which allow the robot that see the ball to share the ball information and ask other robots (that didn't see the ball) to precisely move their head to the ball direction. |

| Do you apply some form of filtering on the detected objects (e. g. Kalman filter for ball position)? |
|---|
| Yes, in ball position estimation, we filter the radius of the ball before applying the linear regression. |

| Is your team performing team communication? Are you using the standard RoboCup Humanoid League protocol? If not, why (e.g. it is missing something you need)? |
|---|
| Yes, we performing team communication in the robot, but not the standard RCHL protocol, because we are unfamiliar with RCHL protocol right now. |

| Please list contributions your team has made to RoboCup |
|---|
| Our contributions are listed on TDP that we have registered for the 2012 to 2019 Robocup. |

| Please list the scientific publications your team has made since the last application to RoboCup (or if not applicable in the last 2 years). |
|---|
| The following is a link to a list of our team's scientific : http://anhar.lecturer.pens.ac.id/publications |

| Please list the approaches, hardware designs, or code your team is using which were developed by other teams. |
|---|
| We developed everything ourselves from scratch. |

| What operating system is running on your robot and which middleware are you using (for example Ubuntu 22.04 and ROS2 Galactic)? |
|---|
| ubuntu 20.04 and ROS Noetic |

| Is there anything else you would like to share that did not fit to the previous questions? |
|---|
| Nothing |

| If you have a description document of your software you would like to share, you may do so here. |
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| filecount - If you have a description document of your software you would like to share, you may do so here. |
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